

ABSTRACT OF THE DISCLOSURE

A variable optical device for selectively controlling propagation of light within an optical waveguide. The optical device comprises: a relief modulation defining a grating disposed proximal the waveguide and having a respective grating index of refraction n_g ; a matrix surrounding at least the relief modulation, the matrix having an index of refraction n_{eo} that is controllable, in response to a selected stimulus between a first value that is substantially equal to the grating index of refraction n_g , and a second value that is different from n_g ; and at least one electrode for supplying the selected stimulus to the matrix-grating system.